

Circinate vulvitis in Reiter's syndrome

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SUMMARY Two cases of Reiter's syndrome in women are described. The diagnosis was based on the presence of increased vaginal and cervical discharge containing excess leucocytes, arthritis, conjunctivitis, and HLA B27 tissue-typing antigen. In addition circinate lesions developed on the vulva similar to those seen on the glans penis. No previous description of these lesions has been traced and the name 'circinate vulvitis' is suggested for these lesions.

Introduction

The prevalence of Reiter's syndrome is not known for it is a disorder which affects many systems of the body, and patients may attend various specialists. Men are more commonly affected than women (King and Nicol, 1975).

Surface manifestations are well recognised including lesions of the penis (Hancock, 1960). In the uncircumcised patient the typical lesion on the glans penis is a characteristic superficial, round erosion, with a well defined margin. Such lesions are usually multiple and are called circinate balanitis. Recently we saw two young women with Reiter's syndrome and similar erosions developed on the vulva. We were unable to find a previous report of such lesions in the literature so the cases are presented here.

CASE 1

A 25-year-old White woman was admitted to St Bartholomew's Hospital on 18 September 1975 complaining of joint pains, and she was referred to the Department of Genital Medicine on 22 September 1975.

Four weeks before admission she had attended the genitourinary medicine department of another hospital with frequency of urination, dysuria, and a painful swollen vulva. Increased vaginal and cervical discharge was noted which on microscopical examination showed excess leucocytes. This subsided with a five-day course of metronidazole although no trichomonads or other pathogens were found on microscopy or culture.

A week after the start of her genitourinary symptoms she had developed acute arthritis of the left first metatarso-phalangeal joint for which she attended a second hospital where gout was diagnosed and treated unsuccessfully with colchicine. The pain later spread to the left ankle. Two days after the joint pains had started she developed bilateral conjunctivitis which was treated with eye-drops at a third hospital. She gave no history of recent skin lesions, mouth ulcers, or diarrhoea. She had previously had two episodes of vaginal candidosis. Her mother had psoriasis. She had had coitus with a friend three months before admission and with a casual acquaintance a month later.

Examination

A white discharge was seen at the introitus with an erythematous macular rash lateral to both labia majora, but more marked on the left. A thick white discharge was present in the vagina, while excess mucus was discharging from the cervical os. There were two irregular erythematous patches on the hard palate. The left ankle was swollen and tender. The left big toe was red and swollen with changes extending over the dorsum of the foot.

Investigation

Vaginal smears showed mycelial elements on the Gram stain, while urethral, cervical and rectal cultures for gonococci, and vaginal cultures for trichomonads and candida were negative. The erythrocyte sedimentation rate (ESR) (Westergren) which on admission was 81 mm in the first hour, rose to 110 mm/h on the 23 September and fell to 61 mm/h on 29 September. Cultures for *Chlamydia trachomatis* were negative in the cervix twice and rectum once. The cervical cytology was normal. The Venereal Diseases Research Laboratory (VDRL) and treponemal haemagglutination (TPHA)

serum antibody tests were negative. The haemoglobin (Hb) was 12.0 g/dl and the white cell count (WCC) $9.3 \times 10^9/l$. HLA B27 was positive. Tests for rheumatoid factor (Latex and SCAT) were negative. Fluorescent antibody tests were positive for anti-nuclear factor (1:100) but were negative to mitochondria, thyroid epithelium, thyroid colloid, gastric parietal cells, skeletal muscle, and smooth muscle antigens. The serum proteins showed a total of 61 g/l of which serum albumin was 30 g/l. Serum uric acid was 0.33 mmol/l. Chest radiograph was normal. Radiographs of the left foot and ankle revealed no calcaneal spurs or other abnormalities.

Progress

After two sets of genital investigations had been obtained, treatment with oxytetracycline 250 mg four times a day was started and continued for three weeks, while genital medication consisted of the insertion of two nystatin pessaries at night for two weeks. Two days after her first genital examination, circinate erosions were observed on the labia minora, which gradually became more obvious and more widespread over the next week (Figure). Dark ground examinations and herpes culture were negative. Thereafter the lesions gradually resolved. One week after admission she had exacerbation of her joint symptoms. There was increased pain in the left foot and right knee. The left knee became swollen and 20 ml of fluid was aspirated; Gram stain showed leucocytes, and culture was sterile. Indomethacin 25 mg three times daily was started, and a satisfactory remission ensued. When seen a month after admission she was clinically well although she still had mycelial elements in her vaginal Gram stain.

Examination and investigation of her regular partner, including early morning assessment, was normal. Her casual contact could not be traced.

CASE 2

A 25-year-old White woman was admitted to Hackney Hospital on 25 November 1976 complaining of pain in her right middle finger and right knee, and referred to Homerton Grove Clinic at the Eastern Hospital, the next day.

Four weeks before admission she had been seen at another hospital with a purulent conjunctivitis and was treated with drugs and a cream. Two weeks before admission she developed pain in her right middle finger and an offensive vaginal discharge with vulval itching.

During the week before admission she had had increased frequency of micturition by day and night. On the day of her admission to Hackney Hospital she had developed pain in the right knee. There was

no relevant past medical history and no family history of psoriasis or arthritis.

She had received distalgesic for the pain in her middle finger. She had had sexual intercourse eight weeks before admission with her regular partner, and a week later with a casual acquaintance.

Examination

A yellow discharge was seen at the introitus. On the outer side of both labia minora there were several round erythematous patches with superficial erosions identical with those seen in Case 1. The right metacarpo-phalangeal joint and right knee were swollen, erythematous, and tender. There was mild bilateral conjunctivitis.

Investigations

A wet preparation of vaginal secretion showed trichomonads, while Gram-stained cervical and urethral smears showed excess leucocytes. Urethral and cervical cultures for gonococci were negative. The Reiter protein complement fixation (RPCF) and VDRL tests for serum antibodies were negative. Hb 13.6 g/dl, WCC $8.0 \times 10^9/l$, ESR 20 mm in the first hour. HLA B27 was positive. Tests for rheumatoid factor and for fluorescent antibodies to all the antigens listed for Case 1 were negative. Total serum protein was 67 g/l of which serum albumin was 30 g/l. Serum uric acid was 0.22 mmol/l.

Fluid aspirated from the knee joint was purulent. Smears and bacterial culture did not show gonococci, or other organisms. Radiographs of chest, right knee, and right hand were normal.

Progress

She was given metronidazole 2 g in a single oral dose, oxytetracycline 250 mg six-hourly, and indomethacin 25 mg at night. The joint symptoms gradually resolved but vaginal irritation persisted. On 6 December 1976 she was found to have vaginal candidosis and was treated with nystatin pessaries, two at night for fourteen nights, plus nystatin cream and one nystatin tablet eight-hourly. Thereafter her recovery was satisfactory. Her casual contact could not be traced.

Discussion

The diagnosis of Reiter's syndrome in these cases is based on the history of vaginal discharge, and the presence of vaginal and cervical discharge containing excess leucocytes, arthritis, and conjunctivitis. The vaginal yeasts found in Case 1 and the trichomonads in Case 2 appear to be unrelated. The diagnosis is supported by the presence of HLA B27 tissue antigen in both cases, and mucosal changes in the mouth of Case 1. The circinate lesions on the vulva were similar to those seen on the glans penis and we



Figure Erosions on inner margin of the right labium minus.

believe they were part of the syndrome in these cases.

According to Hancock (1960) circinate balanitis occurs in 26% of cases. The male to female ratio for Reiter's syndrome is difficult to determine, but appears to be between 10:1 and 50:1 (Paronen, 1948; Oates and Csonka, 1959; Department of Health and Social Security, 1976). If vulval lesions have the same incidence as penile lesions, they may

rarely be seen. Furthermore, in these cases, the development of the vulval lesions coincided with the onset or exacerbation of the arthropathy. If this is the usual behaviour of genital lesions in the female, patients may attend departments where attention is concentrated on the arthropathy and the vulval lesions may not be observed.

In view of the similarity between the lesions reported here and the appearance of circinate balanitis, we suggest the name 'circinate vulvitis' for the vulval lesions.

Case 1 illustrates the difficulty in diagnosing Reiter's syndrome; she attended three separate hospitals for her genitourinary symptoms, conjunctivitis, and arthritis and none of the doctors appeared aware of the clinical features presented at the other institutions. By contrast, in Case 2 the diagnosis was suspected at the second hospital she attended.

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